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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/743,837	01/16/2001	Kei Yoshida	PHJ-99007	8697
24737	7590	10/20/2003	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			AKKAPEDDI, PRASAD R	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 10/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/743,837

Applicant(s)

YOSHIDA, KEI

Examiner

Prasad R Akkapeddi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 10 February 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/24/2003 has been entered.

### ***Drawings***

2. The drawing objections identified in the Office Action dated 05/23/2003 are hereby withdrawn.

### ***Claim Objections***

3. The claim objections identified in the Office Action dated 05/23/2003 are hereby withdrawn.

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4 and 6, 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Funahata in view of Sekiguchi (U.S. Patent No. 6,084,650).

Funahata discloses a reflection type color liquid crystal display device (Fig. 2) for displaying a color image formed based on unit pixels (Fig. 4) each comprising sub-pixels corresponding to primary colors (5a, 5b, 5c) a liquid crystal layer (14), a reflection layer (3) reflecting light which is incident thereon via the liquid crystal layer, a transparent electrode layer (6, 11) and pixel electrode layer (3), the transparent layer (11) located on a side of one main surface (10) of the liquid crystal layer (14), the pixel electrode layer located on a side of another surface (7) of the liquid crystal layer on which light reflected from the reflection layer (3) is incident and a color filter layer (5a, 5b, 5c) comprising primary colors (red, green, blue) for the light to be transmitted through the liquid crystal layer, the sub-pixels (under each color pixel 5a, 5b, 5c), the unit pixel further comprises a sub-pixel (Fig. 4) for increasing luminance (brightness Col. 1, line 57) and the color filter layer further comprises additional portions (5a, 5b, 5c) that transmit light components of predetermined wave-lengths (red, green, blue). In Fig. 13 Funahata discloses that the color filter layer is located on a side of the one main surface (top) on which extraneous light is incident. In Fig. 14, Funahata discloses that the color filter layer is located on a side of another surface (bottom) of the liquid crystal layer on which light reflected from the reflection layer (52) is incident. Funahata discloses that the light components are red, green and blue

which are components of white light. Funahata discloses a light scattering portion (3, diffuse reflector) being extended over the whole of the film (Fig. 2) and the additional portions (5a, 5b, 5c) and the light scattering portion are integrally formed from the same material (Col. 10 lines 10-33). Funahata discloses that the film contains the light components of predetermined wavelengths (red, green, blue) which are components of white light. Funahata discloses a method of manufacturing a light scattering film (Fig. 1a-1i) with a step of forming coloring portions on a support member (Fig. 1g) and a step of forming a light scattering portion (Cols. 7-8). Funahata discloses that the support member is a transparent substrate (52, 53, 54) located on a front side of a display screen in the liquid crystal display device (Fig. 13). Funahata discloses that the support (52, 53, 54) member is a transparent substrate which is located on a rear side of a display screen in the liquid crystal display device and on which a layer of driving element array and a reflection layer are stacked, and in that the coloring portions and the additional portions are formed on the reflection layer (Fig. 14).

a. Funahata does not disclose a color filter layer having two portions with one portion transmitting colors of the primary colors and the other portion transmitting light components of predetermined wavelengths. Sekiguchi on the other hand, in disclosing a LCD device, discloses the color filter layer having two portions (fig. 2- 4) where the portion with the color filters (11, 12 and 13) transmit the three primary colors and the portion (14) that transmits light (external col.5, line 7) with no attenuation. The portion (14) as shown can transmit either white

light or any light component of predetermined wavelength, since there is no attenuation (col. 7, lines 60-65 and col. 9, lines 8-15). Sekiguchi also discloses that a transparent electrode layer (9) (Fig. 21) is located on and in contact with a side of one main surface of the liquid crystal layer (16) on which extraneous light is incident.

b. With regards to the newly added limitation (dated 06/24/2003) in claim 1,

"a light scattering layer located toward a front side of the display device":

Sekiguchi (previously cited) discloses roughened and uneven surfaces (36a) on the second substrate (6) (col. 16, lines 23-31). Substrate (6) is located toward the front side as can be seen in Fig. 2 and the uneven surface scatter light.

Hence Sekiguchi does disclose a light scattering layer located toward a front side of the display as recited in claim 1.

c. With regards to the newly added limitation (dated 06/24/2003) in claim 8,

"the light scattering portion and at least one additional portion being integrally formed from the same material": Sekiguchi discloses the light scattering layer

(36a) and an additional portion (11e), both being on substrate (6) and formed from a resin (36) (col. 16, lines 23-31). Hence they are integrally formed from the same material.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the color filter layer as disclosed by Sekiguchi to the display of Funahata to achieve enhanced light transmittance

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and a bright display and also enable it to effect display with good efficiency by use of an auxiliary light source under condition of insufficient external light.

7. Claims 7 and 11- 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Funahata and Sekiguchi as applied to claims 2 and 3 above, and further in view of Hikiba Masayuki (Hikiba) JP-11295717.

Funahata discloses a color filter transmitting the three primary colors. Sekiguchi, in addition discloses a second portion for transmitting external light. Although external light can be of any color(s) including white light, Sekiguchi does not explicitly disclose that the external light is white light. Hikiba on the other hand, in disclosing a liquid crystal display device, discloses a filter layer transmitting layer with three primary colors (R,G,B) and a portion transmitting white (W) light.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the filter layer as disclosed by Hikiba to improve the brightness and to control the color temperature of white light independently of three primary colors.

8. Claims 5, 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Funahata in view of Sekiguchi.

Funahata does not disclose that the reflection layer and the pixel electrode layer are in the same layer and in common. Sekiguchi discloses (col. 7, lines 49-51) that the display electrodes (15) constituted as reflecting films meaning that they are in the same layer and in common. Therefore, it would have been

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obvious to one having ordinary skill in the art at the time the invention was made to adapt the color filter layer as disclosed by Sekiguchi to the display of Funahata to achieve enhanced light transmittance and a bright display.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prasad R Akkapeddi whose telephone number is 703-305-4767. The examiner can normally be reached on 7:00AM to 5:30PM M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H Kim can be reached on 703-305-3492. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0530.

PRA

Prasad R Akkapeddi  
Examiner  
Art Unit 2871

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TOANTON  
PRIMARY EXAMINER